

Sheshan VLBI Station Report for 2013

Zhiqiang Shen, Qingyuan Fan, Qinghui Liu, Xiaoyu Hong, Bo Xia

Abstract This report summarizes the observing activities at the Sheshan station (SESHAN25) in 2013. It includes the international VLBI observations for astrometry, geodesy, and astrophysics, as well as domestic observations for satellite monitoring. We also report on updates to and development of the facilities at the station.

1 General Information

The Sheshan VLBI station (“SESHAN25”) is located at Sheshan, 30 km west of Shanghai. It is hosted by the Shanghai Astronomical Observatory (SHAO), Chinese Academy of Sciences (CAS). A 25-meter radio telescope is in operation at 1.3, 3.6/13, 5, 6, and 18 cm wavelengths. The Sheshan VLBI station is a member of the IVS and EVN. The SESHAN25 telescope takes part in international VLBI experiments for astrometric, geodetic, and astrophysics research. Apart from its international VLBI activities, the telescope spent a large amount of time on the Chinese Lunar Project, including the testing before the launch of the Chang’e-3 satellite and the tracking campaign after the launch of Chang’e-3.

Shanghai Astronomical Observatory, CAS

Sheshan Network Station

IVS 2013 Annual Report

2 VLBI Observations in 2013

In 2013, SESHAN25 participated in 38 IVS sessions (including 25 INT3 Intensive sessions). SESHAN25 also participated in the EVN sessions in February, June, and October. We participated in the R1601 session instead of the R1600 session due to an antenna motor problem. In order to participate in the Chinese Chang’e-3 Lunar Project, SESHAN25 observed the Chang’e-3 satellite with a long term routine VLBI tracking model for two or three days per week. We missed the sessions of J13273 due to a receiver problem.

3 Development and Maintenance of the Sheshan Telescope in 2013

We have upgraded the Mark 5B+ Firmware Version to 16.31 (API 11.25, SDK 9.2).

4 The Staff of the Sheshan VLBI Station

Table 1 lists the group members of the Sheshan VLBI Station. The staff are involved in the VLBI program at the station with various responsibilities.

Table 1 The staff of the Sheshan VLBI Station.

Name	Background	Position and Duty	Contact
Xiaoyu HONG	Astrophysics	Director, Astrophysics	xhong@shao.ac.cn
Zhiqiang SHEN	Astrophysics	Head of VLBI Division	zshen@shao.ac.cn
Qingyuan FAN	Ant. control	Chief Engineer, Antenna	qyfan@shao.ac.cn
Zhuhe XUE	Software	Professor, FS	zhxue@shao.ac.cn
Quanbao LING	Electronics	Professor, VLBI terminal	qling@shao.ac.cn
Tao AN	Astrophysics	Astrophysics	antao@shao.ac.cn
Bin LI	Microwave	Technical friend, receiver	bing@shao.ac.cn
Bo XIA	Electronics	VLBI friend, VLBI terminal	bxia@shao.ac.cn
Li FU	Ant. mechanics	Engineer, Antenna	fuli@shao.ac.cn
Jinqing WANG	Electronics	Engineer, Antenna	jqwang@shao.ac.cn
Lingling WANG	Software	Engineer, VLBI terminal	llwang@shao.ac.cn
Rongbing ZHAO	Software	Engineer, VLBI terminal	rbzhao@shao.ac.cn
Weiye ZHONG	Microwave	Engineer, receiver	wyzhong@shao.ac.cn
Jin YUAN	Microwave	Engineer, receiver	wyzhong@shao.ac.cn
Xiuting ZUO	Software	Engineer, Antenna	zxt@shao.ac.cn
Wei GOU	Electronics	Engineer	gouwei@shao.ac.cn
Linfeng YU	Electronics	Engineer	lfyu@shao.ac.cn
Yongbin JIANG	Electronics	Engineer	jyb@shao.ac.cn
Yunxia SUN	HVAC	Engineer, Refrigeration	sunyunxia@shao.ac.cn
Xiaocong WU	Electronics	Engineer	wuxc@shao.ac.cn
Wen GUO	Electronics	Engineer	gw@shao.ac.cn

5 Outlook

In 2014 the Sheshan radio telescope will take part in 26 IVS sessions and three EVN sessions. The telescope will regularly monitor the Chang'e-3 satellite in its lunar orbit in 2014.